KIESELMANN
FLUID PROCESS GROUP

Operating instructions

- Translation of the original -

Single seat valve
Two-way changeover valve
Type: 5714 und 5716

pneumatic operation

11.4.12

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2. Information for your safety

We are pleased that you have decided for a high-class KIESELMANN product. With correct application and adequate maintenance, our products provide long time and reliable operation.

Before installation and initiation, please carefully read this instruction manual and the security advices contained in it. This guarantees reliable and safe operation of this product and your plant respectively. Please note that an incorrect application of the process components may lead to great material damages and personal injury.

In case of damages caused by non observance of this instruction manual, incorrect initiation, handling or external interference, guarantee and warranty will lapse!

Our products are produced, mounted and tested with high diligence. However, if there is still a reason for complaint, we will naturally try to give you entire satisfaction within the scope of our warranty. We will be at your disposal also after expiration of the warranty. In addition, you will also find all necessary instructions and spare part data for maintenance in this instruction manual. If you don't want to carry out the maintenance by yourself, our KIESELMANN service team will naturally be at your disposal.

3. Marking of security instructions in the operating manual

Hints are available in the chapter "safety instructions" or directly before the respective operation instruction. The hints are highlighted with a danger symbol and a signal word. Texts beside these symbols have to be read and adhered to by all means. Please continue with the text and with the handling at the valve only afterwards.

Symbol	Signal word	Meaning
	DANGER	Imminent danger which may cause severe personal injury or death.
	ATTENTION	Dangerous situation which may cause slight personal injury or material damages.
	NOTE	Marks application hints and other information which is particularly useful.

4. Safety instructions

4.1 Field of application

Two-way changeover valves are utilised as a multiple valve in food and beverage as well as in pharmaceutical, biotechnological and chemical industries.

ATTENTION

- To avoid danger and damage, the fitting must be used in accordance with the safety instructions and technical data contained in the operating instructions.

4.2 General safety instructions

DANGER

- Danger of crushing or amputating limbs.
  Do not reach into the valve housing when in pneumatic mode.
- Dismantling the valve or valve assemblies from the plant can cause injuries from fluids or gases flowing out.
  Dismantle the valve or valve assembly only when the plant has been rendered pressure-less and free of liquid and gas.
- The spring preloaded valve insert (air open - spring close) may incur serious injuries by jumping out of the housing.
  Pneumatically open the valve before disassembling the clamp coupling, so that upstroke the piston in direction “X“ (Fig. 5 /Page 10).

ATTENTION

- To avoid air leaking, only use pneumatic connection parts that have an o-ring seal facing the even surface.
- When mounting the clamps, the max. torque must not be exceeded (see technical data).
- Steps should be taken to ensure that no external forces are exerted on the fitting.

4.3 General notes

NOTE

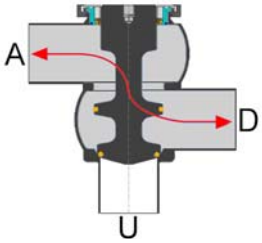
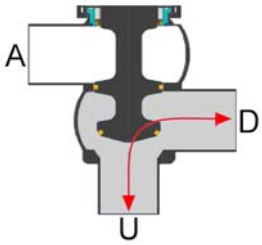
- All data are in line with the current state of development. Subject to change as a result of technical progress.

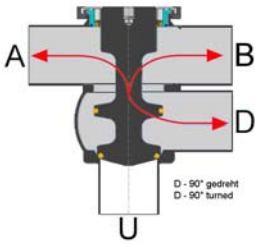
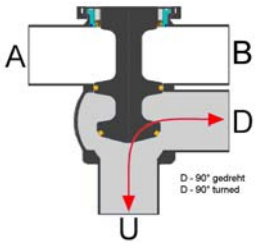
5. Function

5.1 Functional description

- Function of valve: To guide liquid media optionally from one pipe to two pipelines separated from each other and vice versa.(see Fig.1 and 2)
- Operation: Pneumatic lift drive and moved by spring force. (air/spring, air/air)
- Activation: Pneumatical over a 3/2-way solenoid valve. (see “Pneumatic valve actuation” on page 7.)

- **air open - spring close (lö-fs) Basic position: Valve close (Fig.1)**
  - ▶ pneum. operated ⇨ opens the valve
  - ▶ not pneum. operated ⇨ spring force closes the valve
- **spring open - air close (fö-ls) Basic position: Valve open (Fig.2)**
  - ▶ pneum. operated ⇨ closes the valve
  - ▶ not pneum. operated ⇨ spring force opens the valve
- **air open - air close (lö-ls) Basic position: Valve close (Fig.1)**
  - ▶ pneum. operated ⇨ opens the valve
  - ▶ pneum. operated ⇨ closes the valve

S-S-S **Type:5714**	air open - spring close (lö-fs) air open - air close (lö-ls) **Basic position: Valve close**	spring open - air close (fö-ls) **Basic position: Valve open**
	 Fig. 1	 Fig. 2

SS-S-S **Type:5716**	air open - spring close (lö-fs) air open - air close (lö-ls) **Basic position: Valve close**	spring open - air close (fö-ls) **Basic position: Valve open**
	 Fig. 1	 Fig. 2

6. Installation informations

6.1 Installation instructions

Preferably install the two-way changeover valve vertically. Install the connection lines in such a way as to permit the liquids to drain freely out of the housing.

NOTE
If installed horizontally, some minor residual liquids will remain in the ball-shape of the housing.

Valves with welded ends that serve as connecting members can be directly welded to the piping.

6.2 Welding guidelines

Sealing elements integrated in weld components must generally be removed prior to welding.

To prevent damage, welding should be undertaken by certified personnel (EN287). Use the TIG (Tungsten Inert Gas) welding process.

NOTE
Impurities can cause damage to the seals and seals area. Clean inside areas prior to assembly.
To avoid a distortion of the components, all welding parts must be welded to stress-relieved.

7. Service and maintenance

7.1 Maintenance

The maintenance intervals depend on the operating conditions

- temperature, temperature-intervals
- medium and cleaning medium
- pressure and opening frequency

We recommend replacing the seals every 1 years. The user, however should establish appropriate maintenance intervals according to the condition of the seals.

NOTE

		Lubricant recommendation
EPDM; Viton; K-flex; NBR; HNBR	⇨	Klüber Paraliq GTE703*
Silicone	⇨	Klüber Sintheso pro AA2*
Thread	⇨	Interflon Food*

**) It is only permitted to use approved lubricants, if the respective fitting is used for the production of food or drink. Please observe the relevant safety data sheets of the manufacturers of lubricants.*

➤ **Actuator**

The actuator is maintenance-free and non-removable.

7.2 Cleaning

Cleaning of the upper and lower valve chabers is performed with the pipe cleaning system.

8. Control system - and interrrogation system

8.1 Control head - optional-

Optionally, modular valve control systems can be installed to the actuator for reading and actuating valve positions. The standard version is a closed system with twofold limit position messaging (standard), with SPS, Interbus or ASI bus switch-on electronics, and integrated 3/2-way solenoid valves. For tough operating conditions we recommend employing a stainless steel hood.

8.2 Proximity switch mounting set -optional-

For the acquisition of the valve positions over inductive initiators, a limit switch support is mounted on the actuation. The enquiry takes place over the position of the piston rod.

9. Technical data

Model:	Two-way changeover valve - pneumatic operation
Valve size:	NW 25 - 100 NW 1INCH - 4INCH
Connections:	Welding end DIN11850 S2
Temperature range:	• Ambient temperature: +4° to -+45°C • Product temperature: +0° to -+95°C medium dependent • Sterilization temperature: EPDM +140°C short-time (30 min.) HNBR +130°C short-time (30 min.)
Vaccum:	1,5 - 10^{-6} mbar x $^{l}/_{s}$ (test pressure 0,5mbar)
Control air pressure:	6,0 - 8,0 bar
Quality of control air:	ISO 8573-1 : 2001 quality class 3

Material:	**in product contact**	**not in product contact**
Stainless steel type:	1.4404 / AISI316L	1.4301 / AISI304 1.4305 / AISI303
Surfaces:	RA ≦0,8µm e-pol.	metallic bright, e-pol.
Seals:	EPDM (FDA) HNBR (FDA)	HNBR

Operation pressures (bar):
(6bar Control air pressure)

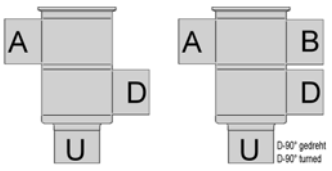
	Nominal width NW					
DIN	25	40	50	65	80	100
INCH	1	1½	2	2½	3	4
Fig.1 Connection (U)						
air open / spring close	10	10	10	6	10	7
air close / spring open	10	10	10	7,5	10	7,5
air open / air close	10	10	10	10	10	10
Connection (A-D)						
air open / spring close	9	9	9	6	10	6
air close / spring open	5	5	5	3	5	3
air open / air close	10	10	10	8	10	8
Fig.2 Connection (A)						
air open / spring close	1,5	1,5	1,5	1	2	1,3
air close / spring open	5	5	5	3	5	3
air open / air close	10	10	10	10	10	10
Connection (D-U)						
air open / spring close	9	9	9	6	10	6
air close / spring open	9	9	9	6	9,5	6
air open / air close	10	10	10	8	10	8

Tightening moment:

Clamp coupling: Nominal width NW

DIN	25	40	50	65	80	100
INCH	1	1½	2	2½	3	4
Torque in Nm	15	15	15	25	20	55

Fluiddynamic measurement :
(accroding to DIN EN 60534-2-3)



Nominal width NW

DIN	25	40	50	65	80	100
INCH	1	1½	2	2½	3	4
A-D AB-D	12	35	65	101	153	170
D-A D-AB	12	35	65	101	153	180
D-U	23	46	84	138	220	270
U-D	25	48	82	140	220	270

10. Pneumatic valve actuation

10.1 Actuator: air open - spring close

Valve function	pneumatic control with MV in control unit (Fig. 3 /Page 7)	pneumatic control with external solenoid valve (MV) (Fig. 3 /Page 7)
Valve "OPEN"	control air feed P ➟ MV1 ➟ P1/LA2 Valve is opening by control air	control air feed ext. MV ➟ LA2 Valve is opening by control air
Valve "CLOSED"	de-aeration LA2/P1 ➟ MV1 ➟ R Valve is closing by spring	de-aeration LA ➟ ext. MV Valve is closing by spring

10.2 Actuator: air close - spring open

Valve function	pneumatic control with MV in control unit (Fig. 3 /Page 7)	pneumatic control with external solenoid valve (MV) (Fig. 3 /Page 7)
Valve "CLOSED"	control air feed P ➟ MV1 ➟ P1/LA1 Valve is closing by control air	control air feed ext. MV ➟ LA1 Valve is closing by control air
Valve "OPEN"	de-aeration P1/LA1 ➟ MV1 ➟ R Valve is opening by spring	de-aeration LA1 ➟ ext. MV Valve is opening by spring

10.3 Actuator: air open - air close

Valve function	pneumatic control with MV in control unit (Fig. 3 /Page 7)	pneumatic control with external solenoid valve (MV) (Fig. 3 /Page 7)
Valve "OPEN"	control air feed P ➟ MV1 ➟ P1/LA1 Valve is opening by control air	control air feed ext. MV ➟ LA1 Valve is opening by control air
Valve "CLOSED"	de-aeration P ➟ MV3 ➟ P3/LA2 Valve is closing by control air	de-aeration ext. MV ➟ LA2 Valve is closing by control air

MV = solenoid valve
R = de-aeration, sound absorber
P = compressed-air inlet (control unit)
LA = compressed air inlet (actuation)
S = slide switch - manual control (solenoid valves)

I = initiatoren
H = angle bracket
E = de-aeration
LA = air connection

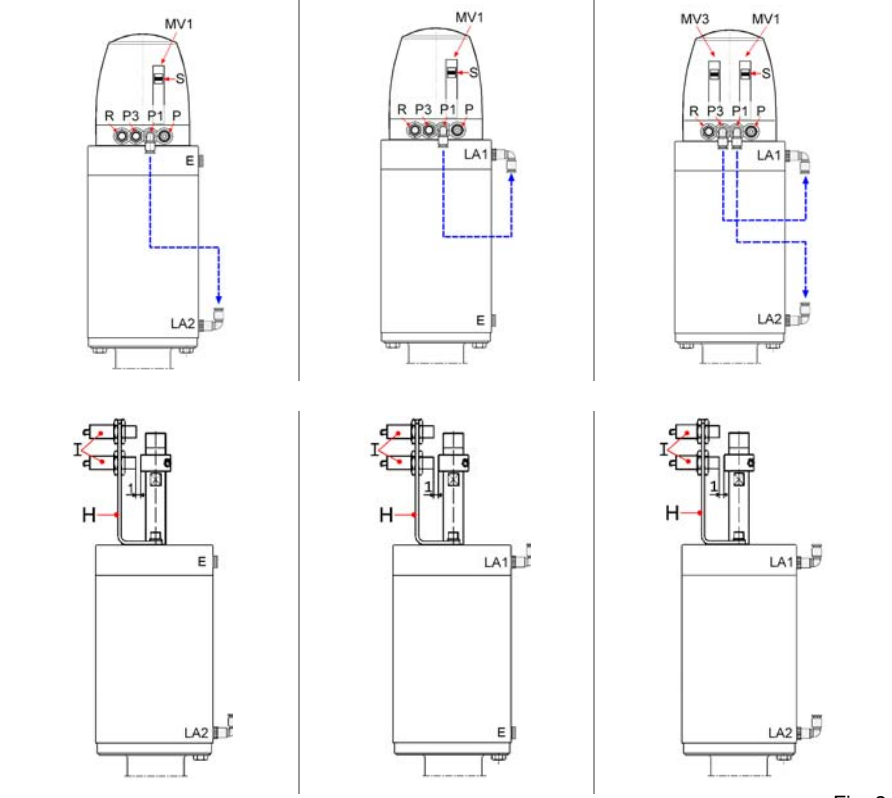


Fig. 3

11. Disassembly and assembly

➢Lubricants
- *EPDM; Viton; k-flex Klüber Paraliq GTE 703*
- *NBR; HNBR; Silicone Klüber Paraliq GB 363*
- *Thread Teflongrease Interflon*

11.1 Removing the pneum. valve insert (air open/spring close)

- Pneumatically open the valve.
- Remove clamp coupling (VK).
- In an upward direction, dismount the complete valve insert (VE) from the valve.

11.2 Removing the pneum. valve insert (air close/spring open) (air open/air close)

- Remove clamp coupling (VK).
- In an upward direction, dismount the complete valve insert from the valve.

11.3 Disassembly

NOTE
All threaded joint have right-hand thread.
Unscrew and remove control air, steam resp. cleaning lines and electrical lines, complete proximity switch mounting or control head.

➤ Exchanging „A“ Item. (D1), (D2), (D3), (D4).

- Loosen screw (6) and move the lantern (5) until the spanner flat (SW1) and the borehole (B) is visible.
- Unscrew piston (1) from piston rod (7) (SW1/B).
- Slide off insert (2) with bearing bush (3), Seal (D3) and O-ring (D4) in opposite direction X (Fig. 5 / Page 10).
- Replace seals and wearing parts.

NOTE
Puncture the o-ring (D1) and (D2) at the centre with a pointed tool and remove them carefully from the groove.

➤ Exchanging „B“ Item. (D5).

- See - Dismantling exchanging seals „A“.
- Remove screw (6) and dismount the lantern (5).
- Screw off the thread connection Pos. (G1) of the piston rods (7) and the spindle (10) at the spanner surfaces (SW1 und SW2).
- Remove axially the piston rod (7) and shaft (9) with spindle (10) from the lift drive.
- Replace the o-ring (D5) (2x).

11.4 Assembly

- Thoroughly clean and slightly lubricate mounting areas and running surfaces.
- Assemble in reverse order.

NOTE
Alternately press and roll the seal (D1) and (D2) into the groove with round body.

Thread connection (G1) assembly with ***removeable screw retention (e.g. Loctite 243)***
- Assemble in reverse order.
- Check the valve function.

12. Dimensions

12.1 Size measurement table

DN	d1	d2	L1	L2	L3
25 **1 INCH**	26 22,1	29 25,4	75	36	401
40 **1½ INCH**	38 34,8	41 38,1	85	48	405
50 **2 INCH**	50 47,5	53 50,8	85	60	409
65 **2½ INCH**	66 60,2	70 63,5	105	76	430
80 **3 INCH**	81 72,8	85 76,1	115	91	531
100 **4 INCH**	100 97,4	104 101,6	130	110	559

12.2 Dimensioned drawing

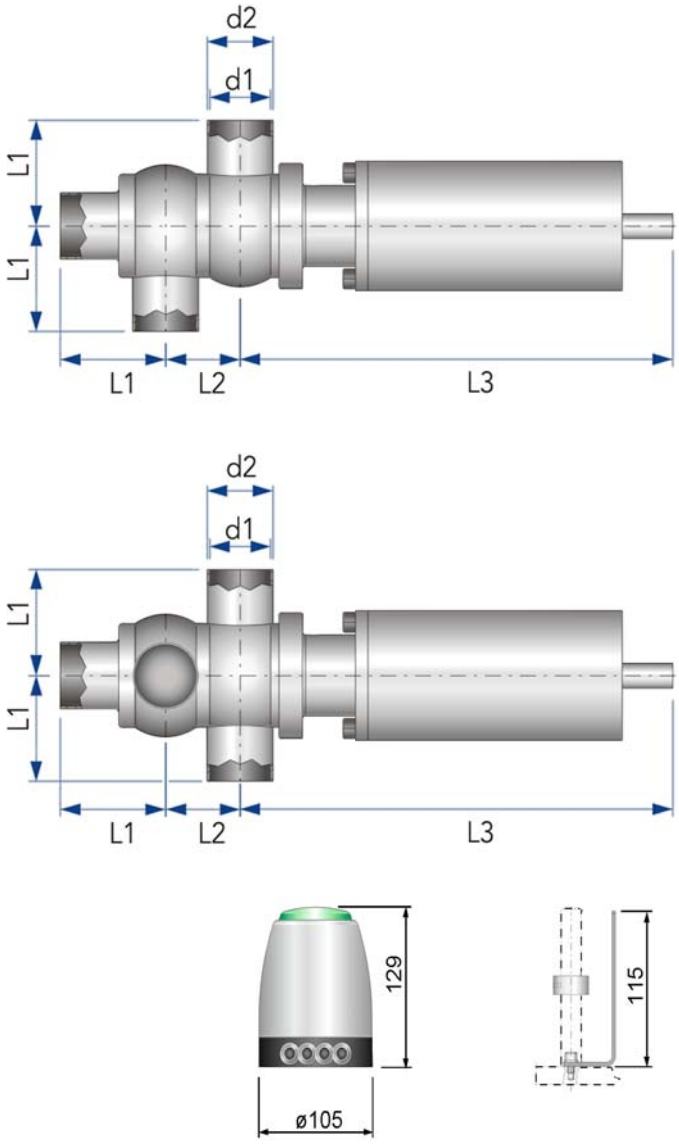


Fig. 4

13. Drawings

A1 = Control head

A2 = Sensor mounting

LA1 = air open / spring close - de-aeration
= air close / spring open - valve stroke
= air open / air close - valve stroke

LA2 = air open / spring close - valve stroke
= air close / spring open - de-aeration
= air open / air close - valve stroke

VE = Valve insert

VG = Housing

VK = Clamp coupling

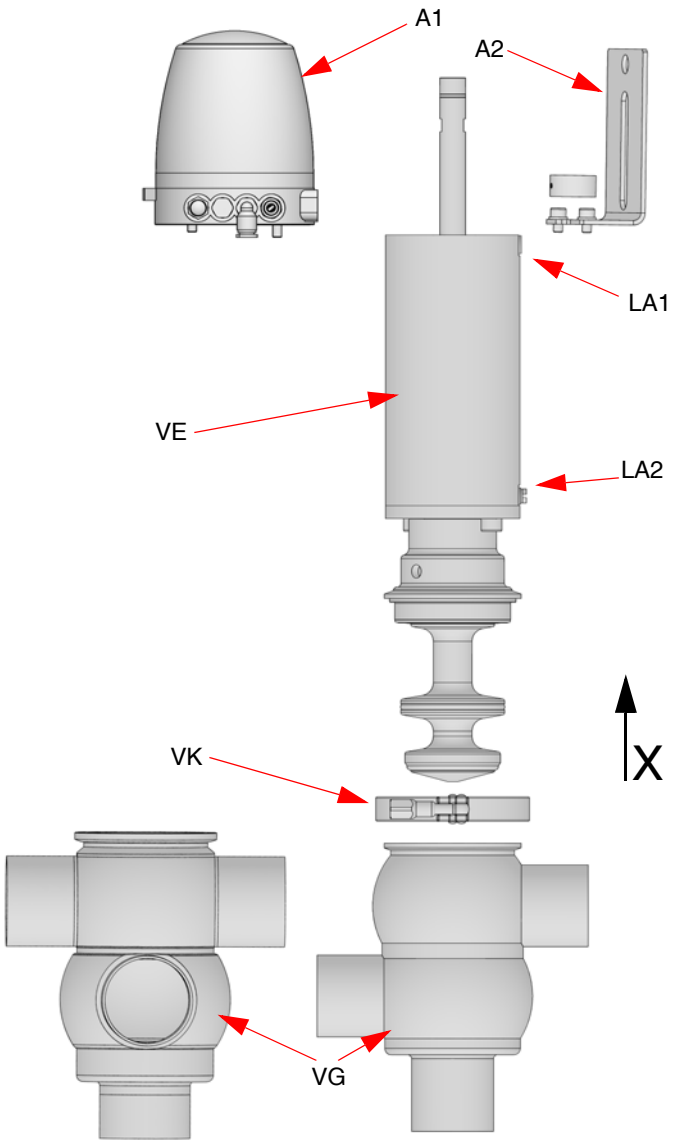


Fig. 5

13.1 Valve insert (VE)

1 = Piston
2 = Insert
3 = Bearing bush
4 = Washer screw retention
5 = Lantern
6 = Screw
7 = Piston rod
8 = Actuator
9 = Shaft
10 = Spindle
11 = O-Ring
12 = Cap
13 = Position indication

D1 = O-Ring
D2 = O-Ring
D3 = O-Ring
D4 = Seal
D5 = O-Rings

B = Bore
G1 = Screw connections locking with lock nut detachable (e.g. Loctite 243)
G2 = Screw connections locking with lock nut high strength (e.g. Loctite 2701)
LA1 = air open / spring close - de-aeration
= air close / spring open - valve stroke
= air open / air close - valve stroke
LA2 = air open / spring close - valve stroke
= air close / spring open - de-aeration
= air open / air close - valve stroke
SW = Wrench size 17mm

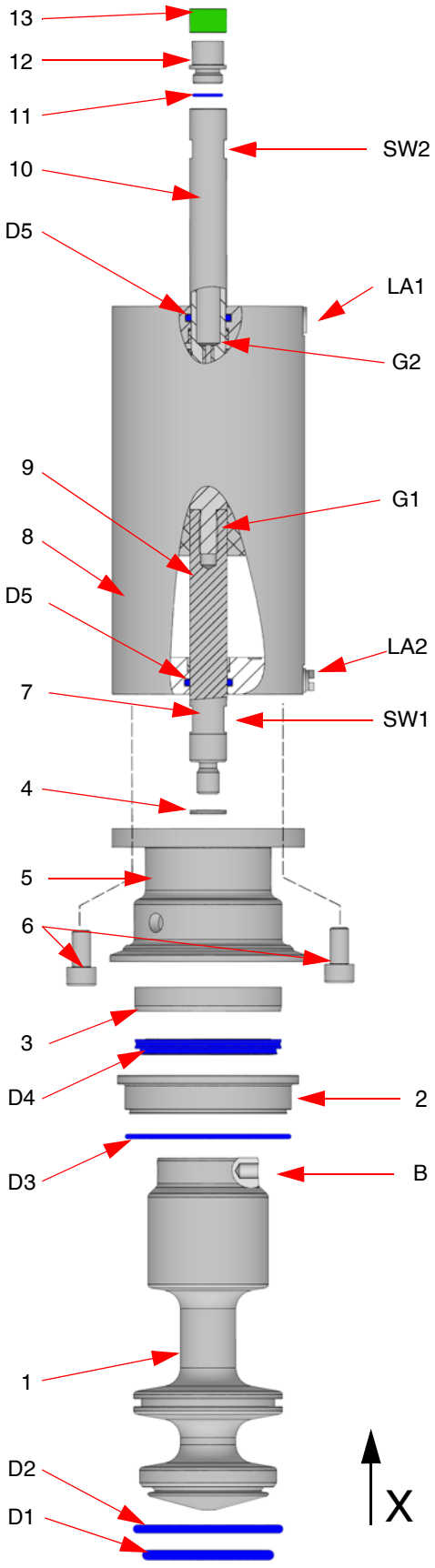


Fig. 6

14. Manufacturing

14.1 Structure of Article number

5714 050 030 - 041

- 041 — Material in product contact / Exterior finish / Interrogation system
- 030 — Material seals in product contact / Construction modifications
- 050 — Valve size
- 030 — Housing type
- 5714 — Product type

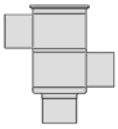
➤ Product type

57xx = Single seat valve

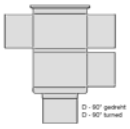
➤ Housing type

Two-way changeover valve

S-S-S



SS-S-S



➤ Valve size

DN = Nominal diameter

DIN	**025** = DN25	**040** = DN40	**050** = DN50	**065** = DN65	**080** = DN80	**100** = DN100	**125** = DN125	**150** = DN150
Zoll	**026** = DN1	**038** = DN1½	**051** = DN2	**064** = DN2½	**076** = DN3	**101** = DN4	-	-

➤ Material seal / Construction modifications

Material seals in product contact:		- EPDM - HNBR
Construction modifications:	Type of actuation	- air open - spring close - air open - air close - spring open - air close

➤ Material in product contact / Exterior finish

020 - 1.4301/1.4307 AISI304/307 - bright turned	**040** - 1.4301/1.4307 AISI304/307 - bright turned
021 - 1.4301/1.4307 AISI304/307 - E-polished	**041** - 1.4301/1.4307 AISI304/307 - E-polished
022 - 1.4301/1.4307 AISI304/307 - unpolished, glass-bead blasted	**042** - 1.4301/1.4307 AISI304/307 - unpolished, glass-bead blasted

➤ Interrogation system

Article number	Control System or Interrogation System (A1, A2)					Pulse generator IG
57xx DN xxx **-041**	-	-----	-	-	Valve without Control- or Interrogation System	------
57xx DN xxx **-750**	Mounting	5630 005 000-020	-	-	Valve with Sensor mounting set	------
Control head ASi-Bus for Single seat valve						
57xx DN xxx **-600**	Control head	5630 500 000-000	ASi-Bus Standard	0 MV	ASI 2-wire cable adapter	5702 DN 005-000
57xx DN xxx **-601**	Control head	5630 501 000-000	ASi-Bus Standard	1 MV	ASI 2-wire cable adapter	5702 DN 005-000
57xx DN xxx **-602**	Control head	5630 502 000-000	ASi-Bus Standard	2 MV	ASI 2-wire cable adapter	5702 DN 005-000
57xx DN xxx **-603**	Control head	5630 503 000-000	ASi-Bus Standard	3 MV	ASI 2-wire cable adapter	5702 DN 005-000
57xx DN xxx **-604**	Control head	5630 503 010-000	ASi-Bus/ES/ABSL	3 MV	Plug M12 4-pin / plug socket M12 5-pin	5702 DN 005-000
57xx DN xxx **-605**	Control head	5630 503 051-000	ASi-Bus/ABSL	3 MV	Plug M12 4-pin, ES-LA	5702 DN 005-000
57xx DN xxx **-606**	Control head	5630 501 010-000	ASi-Bus/ES/ABSL	1 MV	Plug M12 4-pin / plug socket M12 5-pin	5702 DN 005-000
57xx DN xxx **-607**	Control head	5630 501 051-000	ASi-Bus/ABSL	1 MV	Stecker M12 4-pin, ES-LA	5702 DN 005-000
57xx DN xxx **-609**	Control head	5630 503 050-000	ASi-Bus/ABSL	3 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-610**	Control head	5630 502 010-000	ASi-Bus/ES/ABSL	2 MV	Plug M12 4-pin / plug socket M12 5-pin	5702 DN 005-000
57xx DN xxx **-613**	Control head	5630 502 051-000	ASi-Bus/ABSL	2 MV	Plug M12 4-pin, ES-LA	5702 DN 005-000
57xx DN xxx **-614**	Control head	5630 503 053-000	ASi-Bus/ABSL	3 MV	ASI 2-wire cable adapter	5702 DN 005-000
57xx DN xxx **-615**	Control head	5630 503 003-000	ASi-Bus Standard	3 MV	KV M16x1,5 / Pg 9	5702 DN 005-000
57xx DN xxx **-616**	Control head	5630 501 003-000	ASi-Bus Standard	1 MV	KV M16x1,5 / Pg 9	5702 DN 005-000
57xx DN xxx **-619**	Control head	5630 503 151-000	ASi-Bus/ABSL	3 MV	Plug M12 4-pin, LED-ESH	5702 DN 005-000
57xx DN xxx **-620**	Control head	5630 501 050-000	ASi-Bus/ABSL	1 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-624**	Control head	5630 502 050-000	ASi-Bus/ABSL	2 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-625**	Control head	5630 501 158-000	ASi-Bus/ABSL	1 MV	KV M16x1,5, LED-ESH	5702 DN 005-000
57xx DN xxx **-626**	Control head	5630 502 158-000	ASi-Bus/ABSL	2 MV	KV M16x1,5, LED-ESH	5702 DN 005-000
57xx DN xxx **-627**	Control head	5630 503 158-000	ASi-Bus/ABSL	3 MV	KV M16x1,5, LED-ESH	5702 DN 005-000
57xx DN xxx **-629**	Control head	5630 501 151-000	ASi-Bus/ABSL	1 MV	Plug M12 4-pin, LED-ESH	5702 DN 005-000
57xx DN xxx **-630**	Control head	5630 500 061-000	ASi-Bus Standard	0 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-631**	Control head	5630 501 061-000	ASi-Bus Standard	1 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-632**	Control head	5630 502 061-000	ASi-Bus Standard	2 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-633**	Control head	5630 503 061-000	ASi-Bus Standard	3 MV	Plug M12 4-pin	5702 DN 005-000
57xx DN xxx **-640**	Control head	5630 501 058-000	ASi-Bus/ABSL	1 MV	2x KV M16x1,5	5702 DN 005-000
57xx DN xxx **-641**	Control head	5630 502 058-000	ASi-Bus/ABSL	2 MV	2x KV M16x1,5	5702 DN 005-000
57xx DN xxx **-642**	Control head	5630 503 058-000	ASi-Bus/ABSL	3 MV	2x KV M16x1,5	5702 DN 005-000
57xx DN xxx **-K600**	Control head	5631 500 000-000	ASi-Bus/ABSL	0 MV	ASI 2-wire cable adapter, PH	5702 DN 005-000
57xx DN xxx **-K601**	Control head	5631 501 000-000	ASi-Bus/ABSL	1 MV	ASI 2-wire cable adapter, PH	5702 DN 005-000
57xx DN xxx **-K602**	Control head	5631 502 000-000	ASi-Bus/ABSL	2 MV	ASI 2-wire cable adapter, PH	5702 DN 005-000
57xx DN xxx **-K603**	Control head	5631 503 000-000	ASi-Bus/ABSL	3 MV	ASI 2-wire cable adapter, PH	5702 DN 005-000
57xx DN xxx **-K644**	Control head	5631 500 100-000	ASi-Bus/ABSL	0 MV	ASI 2-wire cable adapter, LED-ESH	5702 DN 005-000
57xx DN xxx **-K645**	Control head	5631 501 100-000	ASi-Bus/ABSL	1MV	ASI 2-wire cable adapter, LED-ESH	5702 DN 005-000
57xx DN xxx **-K646**	Control head	5631 502 100-000	ASi-Bus/ABSL	2 MV	ASI 2-wire cable adapter, LED-ESH	5702 DN 005-000
57xx DN xxx **-K647**	Control head	5631 503 100-000	ASi-Bus/ABSL	3 MV	ASI 2-wire cable adapter, LED-ESH	5702 DN 005-000
57xx DN xxx **-K648**	Control head	5631 501 100-000	ASi-Bus/ABSL	1 MV	ASI 2-wire cable adapter, LED-ESH, ES-LA	5702 DN 005-000
57xx DN xxx **-K650**	Control head	5631 501 150-000	ASi-Bus/ABSL	1 MV	Plug M12 4-pin, LED-ESH	5702 DN 005-000
Control head SPS for Single seat valve						
57xx DN xxx **-500**	Control head	5630 300 000-000	SPS-Standard	0 MV	KV M16x1,5 / Pg 9	5702 DN 005-000
57xx DN xxx **-501**	Control head	5630 301 000-000	SPS-Standard	1 MV	KV M16x1,5 / Pg 9	5702 DN 005-000
57xx DN xxx **-502**	Control head	5630 302 000-000	SPS-Standard	2 MV	KV M16x1,5 / Pg 9	5702 DN 005-000
57xx DN xxx **-503**	Control head	5630 303 000-000	SPS-Standard	3 MV	KV M16x1,5 / Pg 9	5702 DN 005-000
57xx DN xxx **-504**	Control head	5630 321 000-000	SPS-Standard	1 MV	Plug M12 7-polig	5702 DN 005-000
57xx DN xxx **-505**	Control head	5630 301 108-000	SPS-Standard	1 MV	2x KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000
57xx DN xxx **-506**	Control head	5630 302 108-000	SPS-Standard	2 MV	2x KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000
57xx DN xxx **-507**	Control head	5630 303 108-000	SPS-Standard	3 MV	2x KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000
57xx DN xxx **-508**	Control head	5630 301 100-000	SPS-Standard	1 MV	KV M16x1,5 / Pg 9, ESH	5702 DN 005-000
57xx DN xxx **-510**	Control head	5630 X00 040-000	SPS-Standard	0 MV	KV M16x1,5 / Pg 9, Valve tag	5702 DN 005-000
57xx DN xxx **-513**	Control head	5630 303 040-000	SPS-Standard	3 MV	KV M16x1,5 / Pg 9, Valve tag	5702 DN 005-000
4xxx DN xxx **-K500**	Control head	5631 300 000-000	SPS-Standard	0 MV	KV M16x1,5 / Pg 9, PH	5702 DN 005-000
4xxx DN xxx **-K501**	Control head	5631 301 000-000	SPS-Standard	1 MV	KV M16x1,5 / Pg 9, PH	5702 DN 005-000
4xxx DN xxx **-K502**	Control head	5631 302 000-000	SPS-Standard	2 MV	KV M16x1,5 / Pg 9, PH	5702 DN 005-000
4xxx DN xxx **-K503**	Control head	5631 303 000-000	SPS-Standard	3 MV	KV M16x1,5 / Pg 9, PH	5702 DN 005-000
4xxx DN xxx **-K544**	Control head	5631 301 100-000	SPS-Standard	0 MV	KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000
4xxx DN xxx **-K545**	Control head	5631 301 100-000	SPS-Standard	1 MV	KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000
4xxx DN xxx **-K546**	Control head	5631 302 100-000	SPS-Standard	2 MV	KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000
4xxx DN xxx **-K547**	Control head	5631 303 100-000	SPS-Standard	3 MV	KV M16x1,5 / Pg 9, LED-ESH	5702 DN 005-000

DN - Nominal diameter z.B. 57xx 050 030-041
MV - Solenoid valve
KV - Compression gland 4,5-6mm
PH - Plastic hood
ESH - Stainless steel cap
ES-LA - Air connection (steel stainless)

15. Spare parts list

15.1 Two-way changeover valve Type: 5714 (1.4404 / AISI316L)

Type: 5714

Seal	Actuator	Article-N0.	Valve insert VE	Housing VG	Seal kit
EPDM	lö - fs	5714 DN 030-xxx	5714 DN 020-041	5713 DN 031-041	5714 DN 990-054
	fö - ls	5714 DN 130-xxx	5714 DN 023-041	5713 DN 031-041	5714 DN 990-054
	lö - ls	5714 DN 330-xxx	5714 DN 026-041	5713 DN 031-041	5714 DN 990-054
HNBR	lö - fs	5714 DN 035-xxx	5714 DN 021-041	5713 DN 031-041	5714 DN 990-050
	fö - ls	5714 DN 135-xxx	5714 DN 024-041	5713 DN 031-041	5714 DN 990-050
	lö - ls	5714 DN 335-xxx	5714 DN 027-041	5713 DN 031-041	5714 DN 990-050

Type: 5716

EPDM	lö - fs	5716 DN 030-xxx	5714 DN 020-041	5715 DN 031-041	5714 DN 990-054
	fö - ls	5716 DN 130-xxx	5714 DN 023-041	5715 DN 031-041	5714 DN 990-054
	lö - ls	5716 DN 330-xxx	5714 DN 026-041	5715 DN 031-041	5714 DN 990-054
HNBR	lö - fs	5716 DN 035-xxx	5714 DN 021-041	5715 DN 031-041	5714 DN 990-050
	fö - ls	5716 DN 135-xxx	5714 DN 024-041	5715 DN 031-041	5714 DN 990-050
	lö - ls	5716 DN 335-xxx	5714 DN 027-041	5715 DN 031-041	5714 DN 990-050

DN = Nominal diameter e.g. 5714 050 030-041 = DN50 , 5714 051 030-041 = 2INCH
xxx = Interrogation system
lö = air open
ls = air close
fö = spring open
fs = spring close

15.2 Valve insert VE

Item	Designation	Material	DN25 1 INCH	DN40 1½ INCH	DN50 2 INCH	DN65 2½ INCH	DN80 3 INCH	DN100 4 INCH
VE	Valve insert lö - fs - DIN - INCH Valve insert fö - ls - DIN - INCH Valve insert lö - ls - DIN - INCH	EPDM	5714 025 020-041 5714 026 020-041 5714 025 023-041 5714 026 023-041 5714 025 026-041 5714 026 026-041	5714 040 020-041 5714 038 020-041 5714 040 023-041 5714 038 023-041 5714 040 026-041 5714 038 026-041	5714 050 020-041 5714 051 020-041 5714 050 023-041 5714 051 023-041 5714 050 026-041 5714 051 026-041	5714 065 020-041 5714 064 020-041 5714 065 023-041 5714 064 023-041 5714 065 026-041 5714 064 026-041	5714 080 020-041 5714 076 020-041 5714 080 023-041 5714 076 023-041 5714 080 026-041 5714 076 026-041	5714 100 020-041 5714 101 020-041 5714 100 023-041 5714 101 023-041 5714 100 026-041 5714 101 026-041
VE	Valve insert lö - fs - DIN - INCH Valve insert fö - ls - DIN - INCH Valve insert lö - ls - DIN - INCH	HNBR	5714 025 021-041 5714 026 021-041 5714 025 024-041 5714 026 024-041 5714 025 027-041 5714 026 027-041	5714 040 021-041 5714 038 021-041 5714 040 024-041 5714 038 024-041 5714 040 027-041 5714 038 027-041	5714 050 021-041 5714 051 021-041 5714 050 024-041 5714 051 024-041 5714 050 027-041 5714 051 027-041	5714 065 021-041 5714 064 021-041 5714 065 024-041 5714 064 024-041 5714 065 027-041 5714 064 027-041	5714 080 021-041 5714 076 021-041 5714 080 024-041 5714 076 024-041 5714 080 027-041 5714 076 027-041	5714 100 021-041 5714 101 021-041 5714 100 024-041 5714 101 024-041 5714 100 027-041 5714 101 027-041
VK	Clamp coupling	AISI316L	2122 065 100-020	2122 065 100-020	2122 065 100-020	2122 080 100-020	2122 115 100-020	2122125100-020
1	Piston - DIN - INCH	AISI316L	5714 025 002-040 5714 026 002-040	5714 040 002-040 5714 038 002-040	5714 050 002-040 5714 051 002-040	5714 065 002-040 5714 064 002-040	5714 080 002-040 5714 076 002-040	5714 100 002-040 5714 101 002-040
2	Insert	AISI316L	5622 050 005-040	5622 050 005-040	5622 050 005-040	5622 065 005-040	5622 080 005-040	5713 100 003-040
3	Bearing bush	AISI316L	5622 050 006-053	5622 050 006-053	5622 050 006-053	5622 065 006-053	5622 080 006-053	5622100006-053
4	Washer screw retention	AISI304	8135 012 195-040	8135 012 195-040	8135 012 195-040	8135 012 195-040	8135 012 195-040	8135012195-040
5	Lantern	AISI304	5706 050 010-021	5706 050 010-021	5706 050 010-021	5706 065 008-021	5706 080 008-021	5706100008-021
6	Screw	AISI316L	8095 010 020-020 M10x20 (2x)	8095 010 020-020 M10x20 (2x)	8095 010 020-020 M10x20 (2x)	8095 010 020-020 M10x20 (2x)	8106 008 016-020 M8x16 (4x)	8106 008 016-020 M8x16 (4x)
7	Piston rod	AISI304	5200 104 052-020	5200 104 052-020	5200 104 052-020	5200 104 052-020	5200 157 057-020	5200 157 057-020
8	Actuator lö - fs Actuator fö - ls Actuator lö - ls	AISI304 AISI304 AISI304	5200 104 051-032 5400 104 051-032 5300 104 050-032	5200 104 051-032 5400 104 051-032 5300 104 050-032	5200 104 051-032 5400 104 051-032 5300 104 050-032	5200 104 051-032 5400 104 051-032 5300 104 050-032	5200 157 051-032 5400 157 051-032 5300 157 051-032	5200 157 051-032 5400 157 051-032 5300 157 051-032
9	Shaft	AISI304	5200 104 053-020	5200 104 053-020	5200 104 053-020	5200 104 053-020	5200 157 056-020	5200 157 056-020
10	Spindle upper	AISI303	5622 100 070-220	5622 100 070-220	5622 100 070-220	5622 100 070-220	5622 100 070-220	5622 100 070-220
11	O-Ring	EPDM	2304 012 020-055	2304 012 020-055	2304 012 020-055	2304 012 020-055	2304 012 020-055	2304 012 020-055
12	Cap	AISI303	5622 100 071-220	5622 100 071-220	5622 100 071-220	5622 100 071-220	5622 100 071-220	5622 100 071-220
13	Position indication	ABS gn	5622 100 058-152	5622 100 058-152	5622 100 058-152	5622 100 058-152	5622 100 058-152	5622 100 058-152

15.3 Seal kit EPDM

Item	Designation	Material	DN25 1 INCH	DN40 1½ INCH	DN50 2 INCH	DN65 2½ INCH	DN80 3 INCH	DN100 4 INCH
	Seal kit	*EPDM*	*5714 025 990-054*	*5714 040 990-054*	*5714 050 990-054*	*5714 065 990-054*	*5714 080 990-054*	*5714 100 990-054*
D1	*O-Ring*	*EPDM*	*2304 041 035-159*	*2304 044 053-159*	*2304 044 053-159*	*2304 053 053-159*	*2304 069 053-159*	*2304 088 053-159*
D2	*O-Ring*	*EPDM*	*2304 053 053-159*	*2304 053 053-159*	*2304 053 053-159*	*2304 069 053-159*	*2304 088 053-159*	*2304 113 053-084*
D3	*Seal*	*EPDM*	*5622 050 010-069*	*5622 050 010-069*	*5622 050 010-069*	*5622 065 010-069*	*5622 080 010-069*	*5622 100 010-069*
D4	*O-Ring*	*EPDM*	*2304 069 026-159*	*2304 069 026-159*	*2304 069 026-159*	*2304 082 026-159*	*2304 098 035-159*	*2304 118 045-055*
D5	*O-Rings (2x)*	*HNBR*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*

15.4 Seal kit HNBR

Item	Designation	Material	DN25 1 INCH	DN40 1½ INCH	DN50 2 INCH	DN65 2½ INCH	DN80 3 INCH	DN100 4 INCH
	Seal kit	*HNBR*	*5714 025 990-050*	*5714 040 990-050*	*5714 050 990-050*	*5714 065 990-050*	*5714 080 990-050*	*5714 100 990-050*
D1	*O-Ring*	*HNBR*	*2304 041 035-050*	*2304 044 053-157*	*2304 044 053-157*	*2304 053 053-157*	*2304 069 053-157*	*2304 088 053-157*
D2	*O-Ring*	*HNBR*	*2304 053 053-050*	*2304 053 053-157*	*2304 053 053-157*	*2304 069 053-157*	*2304 088 053-157*	*2304 113 053-157*
D3	*Seal*	*HNBR*	*5622 050 010-050*	*5622 050 010-050*	*5622 050 010-050*	*5622 065 010-050*	*5622 080 010-050*	*5622 100 010-050*
D4	*O-Ring*	*HNBR*	*2304 069 026-050*	*2304 069 026-150*	*2304 069 026-050*	*2304 082 026-050*	*2304 098 035-050*	*2304 118 045-050*
D5	*O-Rings (2x)*	*HNBR*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*	*2304 019 035-171*

KIESELMANN
FLUID PROCESS GROUP

Declaration of incorporation

Translation of the original

Manufacturer / authorised representative:	KIESELMANN GmbH Paul-Kieselmann-Str. 4-10 75438 Knittlingen Germany
Authorised representative, for compiling technical documents:	Achim Kauselmann KIESELMANN GmbH Paul-Kieselmann-Str. 4-10 75438 Knittlingen Germany

Product name	**Function**
pneum. Lift actuators	Stroke movement
pneum. Rotary actuators	Rotary movement
Ball valves	Media cutoff
Butterfly valves	Media cutoff
Single seat valves	Media cutoff
Flow control valves	Control of liquefied media
Throttle valve	Control of liquefied media
Overflow valve	Definition of fluid pressure
Double seat valve	Media separation
Bellow valves	Sampling of liquids
Sampling valves	Sampling of liquids
Two way valves	Media cutoff
Tankdome fitting	Prevention of overpressure and vacuum, Tank cleaning

The manufacturer hereby states that the above product is considered as an incomplete machine in the sense defined in the Directive 2006/42/EC on Machinery. The above product is exclusively intended to be installed into a machine or an incomplete machine. The said product does not yet conform to all the relevant requirements defined in the Directive on Machinery referred to above for this reason.

The specific technical documents listed in Appendix VII, Part B, have been prepared. The Authorized Agent empowered to compile technical documents may submit the relevant documents if such a request has been properly justified.

Commissioning of an incomplete machine may only be carried out if it has been determined that the respective machine into which the incomplete machine is to be installed conforms to the regulations set out in the Directive on Machinery referred to above.

The above product conforms to the requirements of the directives and harmonized standards specified below:

- DIN EN ISO 12100 Safety of machinery

Knittlingen, 11. 04. 2012

Klaus Dohle
General Director